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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/652,342 | 09/02/2003 | Kenji Shimoyama | 990342A | 1627 |

38834 7590 04/07/2004

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EXAMINER

DIAZ, JOSE R

| | |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
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2815

DATE MAILED: 04/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|------------------------|---------------------|-----------|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/652,342 | KENJI SHIMOYAMA | |
| | Examiner | Art Unit | |
| | José R Díaz | 2815 | <i>pd</i> |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 January 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 16-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 16-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 September 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☒ Certified copies of the priority documents have been received in Application No. 09/274,767.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>9/2/03</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

Figures 2(a)-2(c) and 3(a)-3(b) should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 16-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Tsang (US Pat. No. 4,622,673).

Regarding claim 16, Tsang teaches a method of manufacturing semiconductor light-emitting device comprising the steps of: growing a compound semiconductor epitaxial layer (3, 5, 7) including an active layer (5) on a substrate (1) having a surface having an off-angle to a crystallographic plane of low-degree surface orientation (see fig. 1); forming a protective film (9) having an opening on a surface of the compound

semiconductor epitaxial layer (3, 5, 7) (see fig. 1); and selectively growing a ridge-shaped compound semiconductor epitaxial layer (11) to cover the opening (see fig. 1).

Regarding claim 17, Tsang teaches that the compound semiconductor epitaxial layers including an active layer (15) further include a first conductivity type cladding layer (3) and a second conductivity type first cladding layer (7) (see fig. 1 and col. 4, lines 41-42).

Regarding claim 18, Tsang teaches that the ridge-shaped compound semiconductor epitaxial layer (11) includes a second conductivity type second cladding layer (consider the fact that the layer 11 is an epitaxial layer grown from the cladding layer 7 (col. 4, lines 19-20 and 23-26), which has a second conductivity type (i.e. p-type) (col. 4, lines 41-42)).

Regarding claim 19, Tsang teaches that the second conductivity type second cladding layer (11) is grown as to cover a portion of a surface of the protective film (9) (see fig. 1).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Shimoyama et al. (US Pat. No. 6,023,483) discloses the invention in a related application. Shimoyama et al. (US Pat. No. 6,023,483) discloses the limitation of growing a cladding layer (5) in figure 1. Kizuki et al. (US Pat. No. 6,358,316 B1) discloses growing the cladding layer (307) in figure 36(d). And Tanaka et al. (US Pat. No. 5,974,069) discloses growing the cladding layer (7) in figure 1.

Art Unit: 2815

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to José R Díaz whose telephone number is (571) 272-1727. The examiner can normally be reached on 9:00-5:00 Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Thomas can be reached on (571) 272-1664. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JRD
4/5/04